WD AV

SATA Hard Drives

WD AV hard drives take advantage of significant design advances in WD's storage technology by incorporating SilkStream™ streaming with whisper-quiet acoustics and thermally optimized operation. These design advances, coupled with 7200 RPM performance enable unparalleled reliability and low cost of ownership for manufacturers of digital video recording devices that require 24x7 reliability.

INTERFACE
SATA 6 Gb/s

WIDTH/HEIGHT
3.5-inch/1-inch

ROTATIONAL SPEED
7200 RPM

CAPACITIES
80 GB to 500 GB

MODEL NUMBERS

WD5000AVKX
WD3200AVKX
WD2500AVKX
WD1600AVKX
WD800AVKX

Note: Not all products may be available in all regions of the world.

Product Features

24x7 reliability

With a MTBF of 1 million hours, these drives are designed to last in always-on streaming digital audio/video environments such as PVR/DVR, DVR recorders, and surveillance video recorders.

Quiet

Noise levels have been minimized to less than one sone* – virtually below the threshold of human hearing.

Compatible

Tested for compatibility in a broad range of AV products including set top boxes, DVD recorders, and mainstream surveillance systems.

SilkStream

Optimized for smooth, continuous digital video playback of up to twelve simultaneous HD streams.** SilkStream is compatible with the ATA streaming command set allowing CE customers to use standard streaming management and error recovery options.

NoTouch™ ramp load technology

The recording head never touches the disk media ensuring significantly less wear to the recording head and media as well as better drive protection in transit.

Preemptive Wear Leveling (PWL)

The drive arm frequently sweeps across the disk to reduce uneven wear on the drive surface common to audio video streaming applications.

1 million hours MTBF

Best-in-class reliability for mainstream 3.5-inch form-factor AV storage.***

* A sone is a subjective unit of loudness as perceived by a person with normal hearing.

** Assumes Host Transfer Block size of 2 MB per stream.

***Based upon dual tuner system operating in typical 30°C air ambient environment.

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Specifications[1]	500 GB	320 GB	250 GB	160 GB	80 GB
SATA model numbers	WD5000AVKX	WD3200AVKX	WD2500AVKX	WD1600AVKX	WD800AVKX
Formatted capacity	500,107 MB	320,072 MB	251,059 MB	160,041 MB	80,026 MB
User sectors per drive	976,773,168	625,142,448	490,350,672	312,581,808	156,301,488
RoHS compliant[2]	Yes	Yes	Yes	Yes	Yes
SATA latching connector[3]	Yes	Yes	Yes	Yes	Yes
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch
Performance					
Data transfer rate (max) Buffer to host (SATA) Host to/from drive (sustained)	 6 Gb/s 126 MB/s	 6 Gb/s 126 MB/s	 6 Gb/s 126 MB/s	 6 Gb/s 126 MB/s	 6 Gb/s 126 MB/s
Cache (MB)	16	16	16	16	16
Average latency (ms)	4.2	4.2	4.2	4.2	4.2
Rotational speed (RPM)	7200	7200	7200	7200	7200
Average drive ready time (sec)	8.5	8.5	8.5	8.5	8.5
Reliability/Data Integrity					
Load/unload cycles[4]	50,000	50,000	50,000	50,000	50,000
Non-recoverable read errors per bits read	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}
Limited warranty (years)[5]	3	3	3	3	3
Power Management					
12VDC (A, max)	1.6	1.6	1.6	1.6	1.6
Average power requirements (W) Read/Write Idle Standby Sleep	 6.0 5.6 0.9 0.9	 6.0 5.6 0.9 0.9	 6.0 5.6 0.9 0.9	 6.0 5.6 0.9 0.9	 6.0 5.6 0.9 0.9
Environmental Specifications[6]					
Temperature (°C) Operating Non-operating	 0 to 60 -40 to 70	 0 to 60 -40 to 70	 0 to 60 -40 to 70	 0 to 60 -40 to 70	 0 to 60 -40 to 70
Shock (Gs) Operating (2 ms, read/write) Operating (2 ms, read) Non-operating (2 ms)	 30 65 350	 30 65 350	 30 65 350	 30 65 350	 30 65 350
Average acoustics (dBA)[7] Idle mode Quiet seek mode	 29 30	 29 30	 29 30	 29 30	 29 30
Physical Dimensions					
Height (in./mm, max)	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1
Length (in./mm, max)	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147
Width (in./mm, ± .01 in.)	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6
Weight (lb./kg, ± 10%)	0.99/0.45	0.99/0.45	0.99/0.45	0.99/0.45	0.99/0.45

[1] As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 3 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit www.sata-io.org for details.

[2] WD hard drive products manufactured and sold worldwide after June 1, 2006, meet or exceed Restriction of Hazardous Substances (RoHS) compliance requirements as mandated by the RoHS Directive 2011/65/EU.

[3] SATA models only.

[4] Controlled unload at ambient condition.

[5] The term of the limited warranty may vary by region. Visit http://support.wdc.com/warranty for details.

[6] No non-recoverable errors during operating tests or after non-operating tests.

[7] Sound power level.

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Canada ICES-003 Class B / NMB-003 Classe B

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